Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E –IIst SEMESTER–EXAMINATION – JULY- 2012

Subject code: 1720204 **Date: 10/07/2012**

Subject Name: Software Engineering Methodologies

Time: 10:30 am – 13:00 pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Discuss frequently asked questions about software with answers.	**07**
	(b)	Discuss input-output model of testing.	**07**
Q.2	**(a)**	What is COTS? Discuss COTS integrated system in detail.	**07**
	(b)	Discuss Boehm waterfall methodology.	**07**
		OR	
	(b)	Discuss the Booch methodology.	**07**
Q.3	**(a)**	What is the aim of verification and validation? Justify that though verification and validation costs are high, they are justified. How formal methods can be used at different stages in verification and validation process?	**07**
	(b)	Write the goals of testing. Explain the stages of testing.	**07**
		OR	
Q.3	**(a)**	Generate test cases for library management system.	**07**
	(b)	What is the key issue in model checking? Justify that the model checking is computationally very expensive. Write the model checking process.	**07**
Q.4	**(a)**	Define software metric. Write different product metrics.	**07**
	(b)	Write the design issues that have to be considered in distributed systems engineering.	**07**
		OR	
Q.4	**(a)**	Explain the software reengineering process.	**07**
Q.4	**(b)**	What is the problem with software reengineering? What are the principal factors that affect the costs of system reengineering?	**07**
Q.5	**(a)**	Explain Zachman's framework.	**07**
	(b)	Describe the architectural styles.	**07**
		OR	
Q.5	**(a)**	Explain the basic elements of Architecture description languages.	**07**
	(b)	Explain the process of component based development. Discuss the issues in them.	**07**

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